CASE SERIES JSLS

Incidental Bladder Cancer at the Time of Routine Cystoscopy following Laparoscopic Hysterectomy

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ABSTRACT

Three patients with abnormal uterine bleeding underwent uncomplicated minimally invasive total hysterectomy with routine cystoscopy. At time of cystoscopy, the patients had unexpected findings of bladder masses and postoperatively were expeditiously referred to urology. Final pathology for all revealed low-grade urologic carcinoma. The patients were treated with transurethral excision and are currently in surveillance without concern for recurrence. All three patients were asymptomatic at time of diagnosis. If the masses were not identified at the time of hysterectomy with cystoscopy, it is unclear when the patients may have developed symptoms to warrant a workup and likely would have experienced progression of the malignancy during that time. We hope this case series showcases that abnormal bladder masses are easily identifiable by the benign gynecologist at time of cystoscopy and illustrates another benefit of routine cystoscopy at time of hysterectomy.

Key Words: Bladder cancer, Cystoscopy, Hysterectomy.

CASE SERIES

Hysterectomy remains one of the most common gynecologic surgeries.[1] The use of routine cystoscopy after minimally invasive hysterectomy has been debated in the past with focuses on healthcare costs incurred, money saved, and the benefits of early recognition of occult urologic injuries.[2, 3] A fivefold increase in detection of bladder or ureteric injury has been reported following the use of routine cystoscopy after hysterectomy.[4] American Association of Gynecologic Laparoscopists (AAGL) supports the use of routine cystoscopy following laparoscopic hysterectomy.[5] A recent cost-effective analysis of routine cystoscopy favors the use of diagnostic cystoscopy following laparoscopic hysterectomy.[6] However, in one retrospective study, routine cystoscopy was performed after 20% of laparoscopic hysterectomy for benign indications.[7] At our practice, we perform diagnostic cystoscopy after every minimally-invasive hysterectomy.

Bladder cancer most commonly presents with painless hematuria. In the United States, 19,450 new bladder cancers cases and 4,940 deaths from bladder cancer in women were estimated in 2021, most commonly diagnosed in people aged 65 – 74.[8, 9] A major risk factor for bladder cancer is exposure to tobacco and industrial chemicals, other risks include male sex and older age.[9] Routine screening in asymptomatic adults is not recommended in the United States given lack of data to show a benefit, even in high-risk populations.[10]

Here we report 3 cases from the same surgeon between September 1, 2019 and May 31, 2021 of incidental diagnoses of bladder cancer at the time of routine cystoscopy following laparoscopic hysterectomy. This specific provider performed 110 hysterectomies for benign gynecologic indications with routine cystoscopy in that time. We hope to illustrate another benefit of routine cystoscopy following minimally-invasive hysterectomy.

Case 1: A 69-year-old gravida 4, para 4 (G4P4) with postmenopausal bleeding and benign endometrial sampling pre-operatively who underwent robotic total hysterectomy, bilateral salpingo-oophorectomy, and cystoscopy. Cystoscopy findings notable for 3 cm polypoid lesion near left trigone (**Figure 1**). She was referred to urology and around 4 weeks after initial hysterectomy, she underwent transurethral resection with final pathology showing a low-grade papillary urothelial cell carcinoma. The patient's only risk factor for bladder cancer was her smoking history and she was asymptomatic at time of diagnosis. She has been followed with cystoscopy at 3- and 12-months postoperatively without evidence of recurrence to date.

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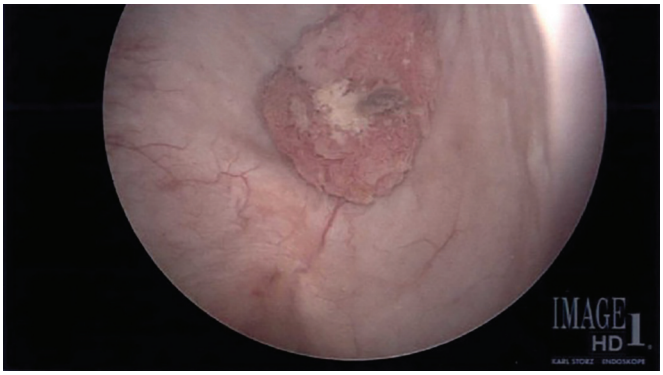

Figure 1. 3 centimeter polypoid lesion near left trigone.

Case 2: A 40-year-old G2P1 with dysmenorrhea and likely adenomyosis who failed medical therapy and underwent total laparoscopic hysterectomy, bilateral salpingectomy, lysis of adhesions, and cystoscopy. Cystoscopy notable for a 5 mm polypoid lesion near the right ureteral orifice (**Figure 2**). She was referred to urology and due to delays during the Covid-19 pandemic, underwent transurethral resection around 3 months after initial hysterectomy. Final pathology showed papillary transitional cell carcinoma, grade 1 of 3. She has no known risk factors for bladder cancer and plans to have annual cystoscopy to monitor for recurrence for 5 years.

Case 3: A 47-year-old G1P2 with abnormal uterine bleeding suboptimally controlled with medical therapy who elected for robotic total hysterectomy, left salpingectomy, lysis of adhesions, and cystoscopy. Cystoscopy notable for 10.5 mm polypoid lesion within the bladder away from the ureteral orifices (**Figure 3**). She completed her transurethral resection around 4 weeks following hysterectomy with pathology showing a low-grade papillary urothelial cell carcinoma. She is also a former smoker but was completely asymptomatic at time of diagnosis. Plans are in place for repeat cystoscopy in 3 months for surveillance.

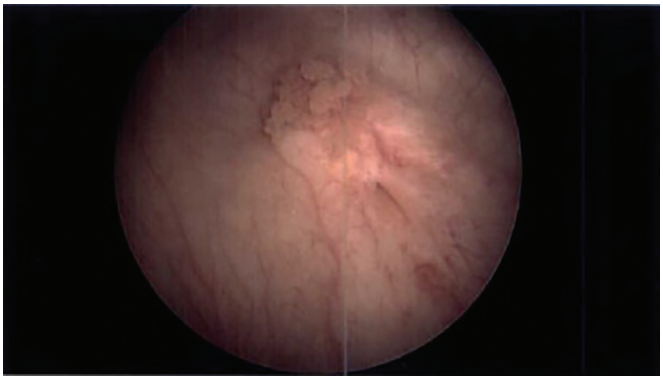

Figure 2. 5 millimeter polypoid lesion near right ureteral orifice.

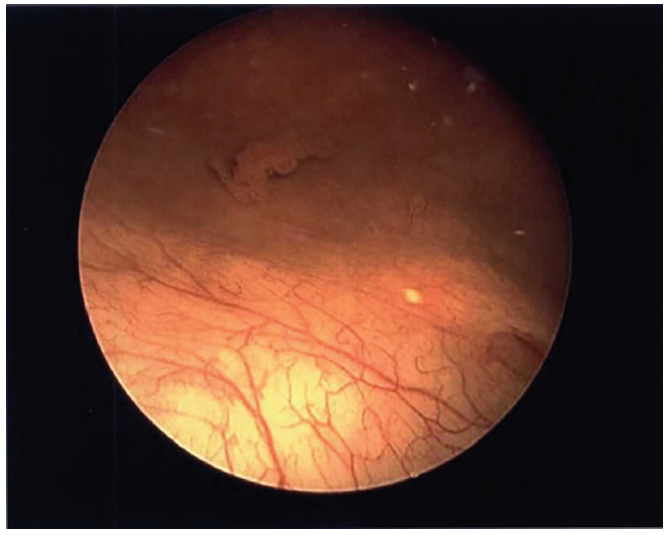

Figure 3. 1.5 centimeter polypoid lesion within the bladder.

Here, we present 3 cases of diagnosis of early-stage bladder cancer at time of routine cystoscopy following hysterectomy for benign gynecologic conditions out of 110 cases over a 20-month period. Women may have poorer outcomes compared to men due to delays in diagnosis given the similarity between symptoms of malignancy and common benign pathologies such as urinary tract infection.[11] The patients in our case series were all asymptomatic at time of their hysterectomies. Our case series demonstrates that abnormal masses concerning for malignancy on cystoscopy are easily recognizable by the gynecologist and aid in early detection and treatment of bladder cancer. Although biopsy of the abnormal bladder masses was not performed at the time of hysterectomy, timely referral did not delay diagnosis nor treatment. Routine screening for bladder cancer in asymptomatic patients is not recommended. While routine cystoscopy at time of hysterectomy is not intended as a form of screening, it can have the added benefit of diagnosing asymptomatic early-stage bladder cancer. We hope this illustrates yet another added benefit of routine cystoscopy at time of laparoscopic hysterectomy.

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